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ABSTRACT

This report describes one of a series of pilot studies conducted to evaluate the instructional effectiveness of the Harcourt Reading Program. The study focused on the program's primary levels and included Grades 1 and 3. Participants, teachers who had not used the program previously, were encouraged to select one theme to pilot over a 6-week period; they also agreed to administer data collection instruments before and after instruction. A total of 33 teachers from 15 different schools in 7 different states volunteered to participate--21 at Grade 1 and 12 at Grade 3. A quasi-experimental pretest-posttest design was used. Before instruction students were administered two pretests; following the pretests, teachers taught the selected book or theme using resources and procedures contained in the Harcourt Reading Program. Students were administered the posttests upon completion of the selected theme. Results indicated: (1) increase in test scores on both of the national standardized tests, the Stanford Achievement Tests and the Metropolitan Achievement Tests, and on the Harcourt Reading Program assessment are both positive and statistically significant for all subtests and total test scores at both grades; (2) gains on both the instructional assessments and the standardized tests were approximately the same, indicating the results were not due to the focus of the instructional assessments; (3) gains of this magnitude are remarkable given that teachers volunteered to teach the units and did not receive extra training; (4) increases were greater for Grade 1 than for Grade 3; and (5) it is significant that no test scores stayed the same--they all increased. Contains 11 tables of data. (NKA)

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A Summary Report of the Instructional Effectiveness of the *Harcourt Reading Program*

by

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U.S. DEPARTMENT OF EDUCATION
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CS 014 381

A Study of the Instructional Effectiveness of the *HARCOURT READING Program*

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Educational Research Institute of America

This report describes one of a series of pilot studies that was conducted to evaluate the instructional effectiveness of the HARCOURT READING Program.

Background Information

Harcourt School Publishers contracted with the *Educational Research Institute of America* (ERIA) to conduct a series of independent pilot studies to evaluate the effectiveness of the HARCOURT READING Program. Harcourt School Publishers sought out volunteer teachers to participate in the study; the Harcourt Department of Test Services scored the national standardized achievement tests; and ERIA conducted the study, scored the *Harcourt Skills Assessments* and analyzed all of the data that were collected. The study described in this report was conducted in the spring of the 1999-2000 school year.

Research Questions

The following research questions guided the design, procedures, and data analysis of the study:

> *Is the HARCOURT READING Program instructionally effective? Do selected themes significantly increase students' understanding of key reading skills, concepts, and strategies as measured by the program's Reading Skills Assessments? As measured by standardized achievement tests (Stanford 9* or *Metropolitan Achievement Test)?*

Design and Procedures of the Study

This study focused on the primary levels of the program and included Grades 1 and 3. Other ERIA studies conducted under contract to Harcourt School Publishers included other primary grades.

Teachers who volunteered to participate in the study had not used the program previously. The teachers were encouraged to select one theme to pilot over a six-week period. They also agreed to administer data collection instruments before beginning instruction and again after completing instruction.

A total of 33 teachers volunteered to participate in the study: 21 at Grade 1 and 12 at Grade 3. The participating teachers came from 15 different schools in 7 different states.

A quasi-experimental pretest-posttest design was used. Before instruction began, students were administered two pretests. The classroom teachers administered all tests. Table 1 summarizes the data collection instruments that were used.

TABLE 1
Data Collection Instruments

Grade	Pretests	Posttests
1	• Harcourt Reading Skills Assessments (matched to each book taught) • Reading Subtests of either the *Stanford Achievement Test, Ninth Edition* (Abbreviated Battery), Level P1/Form S or the *Metropolitan Achievement Test, Seventh Edition*, Level P1/Form S	• Harcourt Reading Skills Assessments (matched to each book taught) • Reading Subtests of either the *Stanford Achievement Test, Ninth Edition* (Abbreviated Battery), Level P1/Form S or the *Metropolitan Achievement Test, Seventh Edition*, Level P1/Form S
3	• Harcourt Reading Skills Tests (matched to each theme taught) • Reading Subtest of either the *Stanford Achievement Test, Ninth Edition* (Abbreviated Battery), Level P3/Form S or the *Metropolitan Achievement Test*, Level ELEM1/Form S	• Harcourt Reading Skills Tests (matched to each theme taught) • Reading Subtest of either the *Stanford Achievement Test, Ninth Edition* (Abbreviated Battery), Level P3/Form S or the *Metropolitan Achievement Test*, Level ELEM1/Form S

Following the pretests, the teachers taught the selected book or theme using the resources and procedures contained in the Harcourt Reading Program. Eighteen of the Grade 1 teachers chose to use Book 1- 4, *Welcome Home*, while only three of the Grade 1 teachers chose to use Book 1-5, *Set Sail*. Grade 3 teachers used a total of five different themes selected from either *Hidden Surprises* or *Journeys of Wonder*. While each theme took 6 weeks to teach, most teachers started the pretests in February and completed the posttests in May. Instruction included a broad sample of reading skills from the strands of decoding, vocabulary, comprehension, literary appreciation, and study skills.

Upon completion of the selected theme, students were administered the posttests. All data collection instruments were returned to the *Educational Research Institute of America* where they were processed. The *Stanford 9 Achievement Tests* and the *Metropolitan Achievement Tests* were scored at the Harcourt Educational Measurement Scoring Center. The *Harcourt Skills Assessments* were scored at ERIA, and all of the data were analyzed by ERIA.

Findings

Descriptions of each of the assessments used in the study and the assessment results are reported for Grades 1 and 3 in this section of the report.

TABLE 2
Content of the Grade 1 Reading Skills Assessment Themes *Welcome Home* and *Set Sail*

Grade 1 Reading Skills Assessment	Theme: Welcome Home	Theme: Set Sail
Subtest	**No. of Items**	**No. of Items**
Decoding		
Diagraphs-Sound Letter Relationships	4	
Vowels-Decodable Words	6	4
Word Structure-Inflections		4
Word Structure-Contractions	4	4
Vocabulary	16	20
Comprehension		
Main Idea		4
Noting Details	4	
Make Predictions	4	
Study Skills		
Alphabetical Order	4	
Language		
Pronouns	4	
Describing Words	4	
Verbs		4
TOTAL	**50**	**40**

Grade One Test Results

Table 3 summarizes the Pretest and Posttest means and standard deviations for the Grade 1 Reading Skills Assessment for *Welcome Home.*

TABLE 3
Grade 1 Theme: *Welcome Home* Results (*N=311*)

Grade 1	Reading Skills Assessment - Book 1-4 (50 items)			
	Lowest Score	**Highest Score**	**Mean Score (% correct)**	**Standard Deviation**
Pretest	8	50	41.03 (82%)	7.80
Posttest	24	50	45.87 (91%)	5.02

A paired t-test for the mean *Reading Skills Assessment* scores showed that the scores improved significantly after instruction ($t=14.625$; $p < .0001$).

TABLE 4
Grade 1 Theme: *Set Sail* Results *(N=54)*

Grade 1	**Reading Skills Assessment - Book 5 (40 items)**			
	Lowest Score	**Highest Score**	**Mean Score (% correct)**	**Standard Deviation**
Pretest	26	39	34.75 (86%)	3.49
Posttest	28	39	36.19 (91%)	3.01

A paired t-test for the mean *Reading Skills Assessment* scores showed that the scores improved significantly after instruction ($t=4.04$; $p < .0001$).

TABLE 5
Grade 1 Results

Grade 1	**Stanford Achievement Tests: Grade 1 *(N=117)***			
	Lowest Score	**Highest Score**	**Mean Score (% correct)**	**Standard Deviation**
Pretest: Word Study Skills	4	20	13.06 (65%)	3.63
Posttest: Word Study Skills	8	20	15.32 (77%)	3.37
Pretest: Word Reading	2	20	12.73 (64%)	4.64
Posttest: Word Reading	3	20	14.87 (74%)	4.01
Pretest: Reading Comprehension	7	30	19.38 (65%)	5.86
Posttest: Reading Comprehension	10	30	23.00 (77%)	5.35
Pretest: Total Reading	20	68	45.33 (65%)	12.67
Posttest: Total Reading	24	69	53.78 (77%)	11.27

A paired t-test for the four subtests and the total test score on the *Stanford Achievement Tests: Grade One* resulted in a significant increase (Word Study Skills: $t=7.82$; $p<.0001$); (Word Reading: $t=5.57$; $p<.0001$); (Reading Comprehension: $t=10.45$; $p<.0001$); (Total Reading: $t=11.40$; $p<.0001$).

TABLE 6
Grade 1 Results

Grade 1	**Metropolitan Achievement Tests: Grade 1** ***(N=225)***			
	Lowest Score	**Highest Score**	**Mean Score (% correct)**	**Standard Deviation**
Pretest: Word Recognition	6	30	17.86 (59%)	5.03
Posttest: Word Recognition	7	30	21.15 (70%)	5.37
Pretest: Vocabulary	2	24	12.20 (51%)	6.06
Posttest: Vocabulary	2	24	15.75 (66%)	5.77
Pretest: Reading Comprehension	4	37	17.94 (45%)	7.51
Posttest: Reading Comprehension	8	39	22.59 (57%)	8.25
Pretest: Total Reading	21	90	48.55 (52%)	16.45
Posttest: Total Reading	24	91	59.58 (63%)	17.24

A paired t-test for the three subtests and the total test score on the *Stanford Achievement Tests: Grade One* resulted in a significant increase (Word Recognition: t=10.610; p<.0001); (Word Vocabulary: t=13.641; p<.0001); (Reading Comprehension: t=12.318; p<.0001); (Total Reading: t=18.290; p<.0001).

Grade Three Test Results

Table 7
Grade 3 Reading Skills Results

Grade 3 Reading Skills Assessment Subtests	Journeys Theme 1	Journeys Theme 2	Journeys Theme 3	Hidden Surprises Theme 1	Hidden Surprises Theme 2
Decoding					
Prefixes and Suffixes				6	
Vocabulary					
Selection Vocabulary	18	14	14	20	16
Vocabulary in Context					6
Comprehension					
Sequence	4				
Fact and Opinion	8				
Compare and Contrast		4			
Summarize		4			
Important Details			8		
Cause and Effect			8		
Predict Outcomes				4	
Draw Conclusions					4
Literary Concepts					
Character's Feelings and Actions		4			
Story Elements					4
Study and Research Skills					
Graphic Sources		4			
Total	**30**	**30**	**30**	**30**	**30**

Table 8 summarizes the means and standard deviations of the scores on the pretest and the posttest for the Grade 3 Reading Skills Assessments.

TABLE 8
Grade 3 Results: Reading Skills Assessment *(N=211)*

Grade Three	Reading Skills Assessment (30 items)			
	Lowest Score	Highest Score	Mean Score (% correct)	Standard Deviation
Pretest	5	30	23.14 (77%)	7.58
Posttest	8	30	25.01 (84%)	5.47

A paired t-test for the mean *Reading Skills Assessment* scores showed that the scores improved significantly after instruction ($t=3.948$; $p < .0001$).

TABLE 9

Grade 3	**Stanford Achievement Tests: Grade 3 *(N=64)***			
	Lowest Score	**Highest Score**	**Mean Score (% correct)**	**Standard Deviation**
Pretest: Reading Vocabulary	5	19	12.85 (64%)	3.77
Posttest: Reading Vocabulary	5	20	13.93 (70%)	3.72
Pretest: Reading Comprehension	2	30	16.39 (55%)	5.94
Posttest: Reading Comprehension	2	30	18.16 (61%)	6.01
Pretest: Total Reading	11	49	29.04 (58%)	8.29
Posttest: Total Reading	15	49	32.54 (65%)	8.64

A paired t-test for the three subtests and the total test score on the *Stanford Achievement Tests: Grade Three* resulted in a significant increase (Reading Vocabulary: t=2.95; p<.005); (Reading Comprehension: t=3.21; p<.002); (Total Reading: t=3.73; p<.0001).

TABLE 10

Grade 3	**Metropolitan Achievement Tests: Grade 3 *(N=87)***			
	Lowest Score	**Highest Score**	**Mean Score (% correct)**	**Standard Deviation**
Pretest: Reading Vocabulary	2	27	14.14 (47%)	6.02
Posttest: Reading Vocabulary	5	28	17.88 (60%)	6.10
Pretest: Reading Comprehension	6	49	29.21 (53%)	11.44
Posttest: Reading Comprehension	6	51	31.24 (57%)	11.65
Pretest: Total Reading	13	74	43.40 (51%)	16.27
Posttest: Total Reading	11	78	49.27 (58%)	17.02

A paired t-test for the three subtests and the total test score on the *Metropolitan Achievement Tests: Grade Three* resulted in a significant increase (Reading Vocabulary: t=8.915; p<.0001); (Reading Comprehension: t=3.173; p<.0001); (Total Reading: t=7.138; p<.0001).

Summary of Results

- The increase in test scores on both of the nationally standardized tests, the *Stanford Achievement Tests* and the *Metropolitan Achievement Tests*, and on the Harcourt Reading Program assessment are both positive and statistically significant for all subtests and total test scores at both Grades 1 and 3.
- The gains on both the instructional assessments and the nationally standardized tests were approximately the same indicating the results were not due to the focus of the instructional assessments. The same increases were found on the nationally standardized tests that cover a wider range of skills than the Harcourt Instructional Assessments.
- Gains of this magnitude for such a brief period of instruction are quite remarkable considering that the teachers volunteered to teach the units and did not receive any extra training.
- Some of the results may have shown even greater gains. However, there was a ceiling effect for some of the assessments. (Students scored perfect or almost perfect scores on the posttests thus limiting the gain scores.)
- The increases were greater for Grade 1 than for Grade 3. This result suggests (as do many studies of this sort) that getting programs established in the earliest grades provides the greatest possibility of success.
- It is also significant that no test scores stayed the same. They all increased. In a short-term study of this sort it is not uncommon to note some test scores that do not increase at all.

The percent of gains on each of the tests is shown in Table 11:

TABLE 11
Summary of Test Score Increases

	Percent Correct on Pretest	Percent Correct on Posttest	Percent Gain from Pretest to Posttest
Grade/Test			
Grade 1: Theme 1 Assessment	82%	91%	+9%
Grade 1: Theme 1 Assessment	86%	91%	+5%
Stanford Achievement Test Grade 1: Total Score	65%	77%	+12%
Metropolitan Achievement Test Grade 1: Total Score	52%	63%	+11%
Grade 3: Themed Assessments	77%	84%	+7%
Stanford Achievement Test Grade 3: Total Score	58%	65%	+7%
Averages	70%	79%	+9%